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Yoshiya Isono

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8139

24573

7590

04/29/2003

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EXAMINER

PRITCHETT, JOSHUA L

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/786,248

Applicant(s)

ISONO ET AL.

Examiner

Joshua L Pritchett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The number of the Chang reference was changed on the form PTO-1449 because the number provided by the applicant was incorrect. The number was changed from 5,407,835 to 5,047,835.

### ***Claim Objections***

The claims are wrought with issues of "claim objections," too numerous to individually set forth. The following examples are presented.

Claims 1-18 are objected to because of the following informalities:

Claim 1 is objected to because the phrase "and the like" in line 7 is indefinite because it does not clearly limit the scope of the claim. The examiner suggests deleting the phrase.

Claim 6 is objected to because the phrase "an electrode" in line 3 is indefinite because it is not clear whether the applicant is referring to a second electrode or the previous electrode.

The examiner recommends changing the phrase to "a second electrode" or "said electrode."

Also the phrase "said other face" lacks proper antecedent basis, because "other face" is not defined in the claim.

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Claim 8 is objected to because the phrase "the vicinity" in line 3 is indefinite because it does not clearly limit the scope of the claim. The examiner suggests the phrase "optical connection with" in place of "the vicinity of."

Claim 9 is objected to because the word "groove-like" in line 2 is indefinite because it does not clearly limit the scope of the claim. The examiner suggests the word "groove" instead of "groove-like."

Claim 15 is objected to because the phrase "an electrode" in line 4 is indefinite because it is not clear whether the applicant is referring to a second electrode or the previous electrode. The examiner recommends changing the phrase to "a second electrode" or "said electrode."

The remaining claims are dependent from claim 1 and inherent the deficiencies thereof.

The applicant is required to thoroughly review and appropriately amend the claims to eliminate these errors.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-2, 4-7 and 15 are rejected under 35 U.S.C. 102(a) as being anticipated by Mori (EP 0 895 112 A1).

Regarding claim 1, Mori discloses an optical module in a package (7 and 8) comprising a plurality of optical elements (4 and 5) and an optical connector section (7e) for connecting to an outside optical connector, tips of optical fibers which are insertedly secured to said optical connector section (col. 5 line 57 – col. 6 line 2) are aligned facing a light-emitting face and a light-receiving face of the optical elements. Mori further discloses the optical module characterized in that the package has a positioning structure comprising walls and the like for directly contacting the optical elements, or mounts which the optical elements are mounted on, whereby the positioning structure ensures that the optical elements of the optical element mounted on the mounts are positioned in predetermined positions with respect to the tips of the optical fibers (col. 5 lines 16-20), which are insertedly secured to the optical connector and protrude to the inside of the package.

Regarding claim 2, Mori discloses a positioning stand having positioning grooves (7e) for positioning-containing protrusions of the optical fibers, which are insertedly secured to said optical connector and protrude to the inside of the package, is molded together with the positioning structure (Fig. 3).

Regarding claim 4, Mori discloses the positioning structure comprises protrusion for positioning which protrude inwardly from inner wall of the package (7g).

Regarding claim 5, Mori discloses the positioning structure comprises a side face of the positioning stand provided so as to touch the side face of the mounts which the optical elements are mounted on and thereby position the mount (Fig. 6). Fig. 6 shows the positioning structure (7) contacting the mounting surface (2).

Regarding claims 6 and 15, Mori discloses the optical elements are attached to one face of the mount, comprising electrodes which continue to an adjacent face, another face directly contacting a lead terminal of the package, and an electrode on the other face electrically connected to the lead terminal (Figs. 2 and 5). Fig. 2 shows an electrodes contacting the optical elements and continuing to an adjacent face of the mount. Fig. 5 shows the mount electrically connected to lead terminals (9).

Regarding claim 7, Mori discloses the light-emitting element and the light-receiving element are attached to separate mounts and the positions of these two mounts are deviate to the front and rear (Fig. 2). Fig. 2 shows that laser (4) and the diode (5) are attached to separate locations of the mounting surface (2) and one is displaced from the other from the front to the rear of the surface.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 8-12, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori in view of Ishida (EP 0 645 651 A1).

Regarding claim 3, Mori teaches the invention as claimed but lacks reference to the connector section being a separate ferrule. Ishida teaches the connector section being a ferrule provided separately to the package (col. 42 lines 52-55). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the connector section of Mori be a ferrule provided separate from the package as taught by Ishida for the purpose of using a multi-fiber bundle instead of a single fiber.

Regarding claim 8, Mori teaches the invention as claimed including the optical fiber located in the vicinity of the optical elements but lacks the optical fibers in grooves. Ishida teaches the optical fibers on the optical element side are provided in positioning grooves along a join end face of the package side wall section facing the optical connector positioned with respect to the optical elements by being pressed by a pressing member (3c), thereby enabling them to be butt-connected to the optical fiber on said optical connector side as the join end face (Fig. 11). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the optical fibers of Mori in grooves as taught by Ishida for the purpose of holding the fibers in a predetermined location.

Regarding claim 9, Mori teaches the invention as claimed but lacks the pressing member positioned by inserting into a groove-like notch. Ishida teaches the pressing member positioned by inserting into a groove-like notch, which passes through the package sidewall (Fig. 11). Fig. 11 shows the pressing member (3c) positioned by grooves in the package sidewall. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to equip Mori the pressing member and grooves taught by Ishida for the purpose of holding the

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pressing member in place without the an extreme amount of force that could potentially damage the optical fibers.

Regarding claim 10, Mori teaches the invention as claimed but lacks a meshing section. Ishida teaches the use of a meshing section (113) around the installation position of the pressing member, thereby restricting positional deviation of the pressing member in the long direction of the positioning grooves (Fig. 49). Fig. 49 shows a material surrounding the pressing member to holding the pressing member in place. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to equip Mori with the pressing member and meshing section of Ishida for the purpose of sealing gap between the optical fibers and the pressing member.

Regarding claim 11, Mori teaches the invention as claimed but lacks fitting pinholes. Ishida teaches the use of fitting pinholes (45) which fitting pins (56) for positioning, provided so as to cross over the optical connector, are inserted in, and optical fiber insertion holes parallel to each other (Fig. 26). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to equip Mori with fitting pin holes parallel to the optical fiber holes as taught by Ishida for the purpose of connecting the module to another device and ensuring good connection between the optical fibers of the module and the optical fibers of the other device.

Regarding claim 12, Mori teaches the optical fiber insertion holes comprise tapered optical fiber insertion openings (Fig. 12).

Regarding claim 16, Mori teaches the invention as claimed but lacks reference to a receptacle fitting optical module. Ishida teaches a receptacle fitting optical module (B) with



protrusions and the optical fibers of the optical connector being butt-aligned and optically connected to optical module (Fig. 63, C). Ishida further teaches protrusions in the side face of the optical module (231), grooves provided in the receptacle (213) for fitting the protrusions in and the protrusions of the optical module fitted into the grooves of the receptacle and secured by securing members (231). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to equip Mori with the receptacle fitting optical module as taught by Ishida for the purpose of connecting the optical module to an external communication device to transfer the signal away from the module.

Regarding claim 18, Mori teaches the invention as claimed but lacks the securing members. Ishida teaches the securing members comprising a pressing member having elasticity and being substantially C-shaped in cross-section fitting concavities for fitting the pressing member are provided in the receptacle (Fig. 63). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to equip Mori with the securing member and means of Ishida for the purpose of attaching the receptacle fitting optical module to the optical module in a releasable manner.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori in view of Hashimoto (US 6,480,639).

Mori teaches the invention as claimed but lacks the optical elements being sealed. Hashimoto teaches the use of both light-permeable (9) material and light-absorbing (8) material to seal both the optical elements (Fig. 24). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to seal the Mori optical elements with the light-

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permeable and light-absorbing material of Hashimoto for the purpose of blocking leakage light of the light-emitting element.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori in view of Hashimoto as applied to claim 13 above, and further in view of Kauffman (US 4,987,164).

Mori in combination with Hashimoto teaches the invention as claimed but lacks reference to the material used to create the light-absorbent material. Kauffman teaches the use of organic polymeric material to create a light-absorbent material (col. 1 lines 34-43). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the light absorbent material of Mori in combination with Hashimoto be an organic polymeric material as taught by Kauffman for the purpose of absorbing ultraviolet light.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori in view of Ishida as applied to claim 16 above, and further in view of Official Notice.

Mori in combination with Ishida teaches the invention as claimed but lacks the use of an adhesive. Official Notice teaches that it is well known to use an adhesive to secure two objects together. It would have been obvious to a person of ordinary skill at the time the invention was made to have the securing members of Mori in combination with Ishida attached to the receptacle fitting optical module using an adhesive as taught by Official Notice for the purpose of permanently attaching the optical module to the receptacle fitting optical module.

### *Conclusion*

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Duncan (US 5,285,512) teaches an optical module with a emitting and receiving optical elements.

Chang (US 5,047,835) teaches a receptacle fitting optical module.

Tabalba (US 4,913,511) teaches an optical module with emitting and receiving optical elements.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L Pritchett whose telephone number is 703-305-7917.

The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JLP  
April 18, 2003

  
Patent Examiner  
Art Unit 2872  
Eunha Cherry